DOCKET NO: 289264US0PCT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF	:
STEFAN KIRSCH, ET AL.	: EXAMINER: REDDY, K. P.
SERIAL NO: 10/579,096	:
FILED: MAY 12, 2006	: GROUP ART UNIT: 1796
FOR: POLYMER-CONTAINING SULFOSUCCINATE DISPERSIONS	:

SECOND APPEAL BRIEF

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

This is an appeal of the Rejection dated March 20, 2008 of twice-rejected Claims 1-25. A previous Notice of Appeal was timely filed on January 24, 2008. A new Notice of Appeal is **submitted herewith**.

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is BASF SE, having an address at 67056 Ludwigshafen, Germany.

II. RELATED APPEALS AND INTERFERENCES

Appellants, Appellants' legal representative and the assignee are aware of no appeals, interferences, or judicial proceedings which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF THE CLAIMS

Claims 1-25 stand rejected and are herein appealed.

IV. STATUS OF THE AMENDMENTS

No amendment under 37 CFR 1.116 has been filed. However, an amendment under 37 CFR 1.111 was filed on June 25, 2008.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

A summary of the claimed subject matter, as claimed in independent Claim 1, is mapped out below, with reference to page and line numbers in the specification added in **[bold]** after each element.

Claim 1 is drawn to a method of enhancing at least one performance property of an aqueous polymer dispersion comprising at least one water-soluble ionic compound, **[page 1, lines 5-6]** which comprises

removing at least 50 mol% of the at least one water-soluble ionic compound from the polymer dispersion, **[page 1, lines 7-8]** and then **[page 1, line 8]**

adding at least one salt of a monoalkyl or dialkyl ester of a sulfonated dicarboxylic acid. **[page 1, lines 8-9]**

VI. GROUNDS OF REJECTION

Ground (A)

Claims 1-25 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the description requirement.

Ground (B)

Claims 1-13, 15-18, 20-21 and 23 stand rejected under 35 U.S.C. § 102(b) as anticipated by US 5,286,843 (Wood '843), as evidenced by US 4,940,732 (Pastorino et al).

Ground (C)

Claims 1-13, 15-18, 20-21 and 23 stand rejected under 35 U.S.C. § 102(b) as anticipated by US 5,536,811 (Wood '811), as evidenced by Pastorino et al.

Ground (D)

Claims 1-13, 15-18, 20-21, 23 and 25 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Wood '843 (as evidenced by Pastorino et al)[1] and in view of a BASF technical information publication for Acronal ® A220 (BASF).

Ground (E)

Claim 22 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Wood '843 (as evidenced by Pastorino et al), in view of BASF and US 3,964,955 [sic, US 5,879,663] (Nakabayashi et al).

[1] While Pastorino et al is not listed in the statement of the rejection, it is still being relied upon. See n.1 at page 4 of the Office Action. "Where a reference is relied on to support a rejection, whether or not in a 'minor capacity,' there would appear to be no excuse for not positively including the reference in the statement of rejection." *In re Hoch*, 166 USPQ 406, 407 n.3 (CCPA 1970). See also MPEP 706.02(j).

Ground (F)

Claims 14, 19 and 24 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Wood '843 (as evidenced by Pastorino et al), in view of BASF and WO 02/10306 (Kleiner et al).

VII. ARGUMENT

Ground (A)

Claims 1-25 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the description requirement. However, the rejection is now moot in view of the above-discussed amendment in Section IV. above. Accordingly, it is respectfully requested that this rejection be REVERSED.

Ground (B)

Claims 1-13, 15-18, 20-21 and 23 stand rejected under 35 U.S.C. § 102(b) as anticipated by Wood '843, as evidenced by Pastorino et al. The rejection is untenable and should not be sustained.

The Examiner's rationale for this rejection is that Claim 1 does not specify the order of the removing and adding steps, and then finds that giving the claims their "broadest interpretation", the claims are inclusive of either order. While Applicants pointed out in the previously-filed Appeal Brief that the Examiner's interpretation was incorrect, the issue is now moot in view of the amendment referred to under Section IV. above. The rejection is also moot, since it is based on the claims prior to the above-referenced amendment. Accordingly, it is respectfully requested that this rejection be REVERSED.

Ground (C)

Claims 1-13, 15-18, 20-21 and 23 stand rejected under 35 U.S.C. § 102(b) as anticipated by Wood '811, as evidenced by Pastorino et al. The rejection is untenable and should not be sustained. Wood '843 and Wood '811 are related as parent application and divisional application, respectively, and thus have identical disclosure. Therefore, the argument under Ground (B) is hereby incorporated by reference. Accordingly, it is respectfully requested that this rejection be REVERSED.

Ground (D)

Claims 1-13, 15-18, 20-21, 23 and 25 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Wood '843 in view of Pastorino et al and BASF. The rejection is untenable and should not be sustained.

As recited in Claim 1, an embodiment of the present invention is a method of enhancing at least one performance property of an aqueous polymer dispersion comprising at least one water-soluble ionic compound, which comprises removing at least 50 mol% of the at least one water-soluble ionic compound from the polymer dispersion ("removing" step), and then adding at least one salt of a monoalkyl or dialkyl ester of a sulfonated dicarboxylic acid ("adding" step).

As described in the specification beginning at page 1, line 17, the action of water on an adhesive film leads to an unwanted clouding which is called water whitening, which clouding is known to be attributable to the presence of water-soluble ionic compounds in the adhesive film. The specification then describes that in EP-A-571069, which is from the same patent family of Wood '843, it is recommended that these ionic compounds be removed from polymer dispersions by treatment with an ion exchange resin. However, although the

resulting polymer dispersions then have an improved water whitening behavior, other of their performance properties, such as poor wettability on customary substrates such as polymer films or silicone papers, result.

In addition to the discussion of Wood '843 above, the Examiner notes that in Example 1 thereof, a product known as Emcol® 4500 surfactant is used to make a pressure sensitive adhesive formulation therein. The pressure sensitive adhesive formulation of Example 1 is then subjected to deionization in Example 3, according to Wood's invention. The Examiner relies on Pastorino et al as disclosing that Emcol® 4500 is a sodium dioctyl sulfosuccinate (column 4, lines 4-5).

BASF discloses a product Acronal® A 220 as an acrylic polymer having very good inherent adhesion and tack, and that the wetting process on various substrates with Acronal® A 220 formulations can be facilitated by the use of 0.5-1.5% of a standard anionic surfactant such as the sodium salt of dioctyl sulfosuccinate.

The Examiner holds that it would have been obvious to add the sodium salt of dioctyl sulfosuccinate to the adhesive of Wood '843 for improving its wettability in view of BASF.

Without the present disclosure as a guide, one skilled in the art would not have combined Wood '843 with BASF. As discussed above, Wood '843 discloses the necessity for removing ionic compounds from polymer dispersions. Why, absent the present disclosure as a guide, would one skilled in the art remove such ionic compounds and then add back an ionic compound with any expectation of success? In addition, Applicants note that the examples in the specification herein, at page 10, line 30 through the end of page 12, exemplify various commercially customary polymer dispersions, including Acronal® A 220, both treated according to the present invention and untreated. Table 1 therein shows water whitening of the untreated Acronal® A 220. One skilled in the art reading BASF might

expect better wetting action after adding the sodium salt of dioctyl sulfosuccinate to Acronal® A 220 but would also expect water whitening behavior, in view of Wood '843's disclosure of the deleterious effects of ionic compounds.

For all the above reasons, it is respectfully requested that this rejection be REVERSED.

Ground (E)

Claim 22 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Wood '843 (as evidenced by Pastorino et al), in view of BASF and Nakabayashi et al. The rejection is untenable and should not be sustained.

Even if diafiltration were used as the deionization mechanism of Wood '843 modified by BASF, the result would still not be the presently-claimed invention. Accordingly, it is respectfully requested that this rejection be REVERSED.

Ground (F)

Claims 14, 19 and 24 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Wood '843 (as evidenced by Pastorino et al), in view of BASF and Kleiner et al. The rejection is untenable and should not be sustained.

The disclosures and deficiencies in the combination of Wood '843, Pastorino et al and BASF have been discussed above. Kleiner et al does not remedy these deficiencies.

Kleiner et al discloses a pressure sensitive adhesive composition made by emulsion polymerization, which emulsion polymer may further comprise a surfactant which comprises, based on the total weight of the dry polymer, from about 0.5% to about 1.5% by weight of sodium dialkyl sulfosuccinate, from about 0.5 to about 1.5% by weight of a particular

sulfosuccinamate, and up to about 4% by weight of ammonium or sodium salts of sulfated alkylphenoxy poly(ethyleneoxy) ethanol (page 3, lines 4-9). In addition, Kleiner et al discloses that other additives well known in the art, such as wetting agents and thickeners may be added (page 13, lines 1-4), and that their composition shows an unexpectedly high level of adhesion to polar, non-polar and difficult-to-bond substrates (page 4, lines 15-18), among which is polyvinylchloride (page 4, line 22).

The Examiner holds that it would have been obvious to add other additives such as thickeners to, presumably the adhesive obtained by the method of Wood '843 as modified by BASF in view of Kleiner et al.

In reply, the aqueous polymer dispersion of the above-rejected claims, since they all ultimately depend on Claim 10, would necessarily exclude the required tetrasodium (N-dicarboxy-alkyl) N-alkyl sulfosuccinamate of Kleiner et al, as well as the optional ammonium or sodium salts of sulfated alkylphenoxy poly(ethyleneoxy) ethanol of Kleiner et al, since they are not within the terms of the anionic surfactant Markush group therein. In other words, when less than 100 mol% of the water-soluble ionic compound component is removed, any anionic surfactant originally present that remains is limited to the anionic surfactant recited in the Markush group. Thus, Claim 10 necessarily excludes the above-discussed compounds of Kleiner et al.

If one skilled in the art would have combined Kleiner et al with Wood '843 as modified by BASF, that person would have included all the required components of Kleiner et al. Clearly, it would not have been obvious to exclude a required component. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). See also MPEP 2143.01.

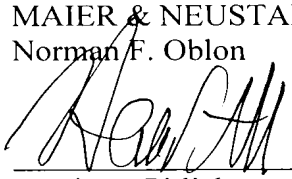
For all the above reasons, it is respectfully requested that this rejection be REVERSED.

VIII. CONCLUSION

For the above reasons, it is respectfully requested that all rejections be REVERSED.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.
Norman F. Oblon



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CLAIMS APPENDIX

Claim 1: A method of enhancing at least one performance property of an aqueous polymer dispersion comprising at least one water-soluble ionic compound, which comprises

removing at least 50 mol% of the at least one water-soluble ionic compound from the polymer dispersion, and then

adding at least one salt of a monoalkyl or dialkyl ester of a sulfonated dicarboxylic acid.

Claim 2: The method of claim 1, wherein the aqueous polymer dispersion is obtained by emulsion polymerization.

Claim 3: The method of claim 1, wherein the dispersed polymer in the polymer dispersion is a polymer obtained by free-radical addition polymerization which is synthesized from at least 60% by weight of at least one principal monomer selected from the group consisting of C_1 to C_{20} alkyl (meth)acrylates, vinyl esters of carboxylic acids comprising up to 20 carbon atoms, vinylaromatics comprising up to 20 carbon atoms, ethylenically unsaturated nitriles, vinyl halides, vinyl ethers of alcohols comprising 1 to 10 carbon atoms, aliphatic hydrocarbons comprising 2 to 8 carbon atoms and one or two double bonds, and mixtures thereof.

Claim 4: The method of claim 1, wherein the at least one water-soluble ionic compound is an ionic emulsifier.

Claim 5: The method of claim 1, wherein at least 90 mol% of the at least one water-soluble ionic compound is removed.

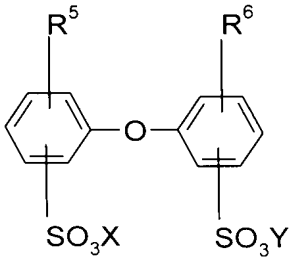
Claim 6: The method of claim 1, wherein the at least one ionic compound is removed by treating the dispersion with an ion exchanger resin, by diafiltration or by dialysis.

Claim 7: The method of claim 1, wherein the at least one salt of a monoalkyl or dialkyl ester of a sulfonated dicarboxylic acid is a dialkyl ester.

Claim 8: The method of claim 1, wherein the at least one salt of a monoalkyl or dialkyl ester of a sulfonated dicarboxylic acid is a dialkyl ester of sulfonated succinic acid.

Claim 9: The method of claim 1, wherein the at least one salt of a monoalkyl or dialkyl ester of a sulfonated dicarboxylic acid is added in an amount of from 0.01 to 5 parts by weight per 100 parts by weight of the dispersed polymer.

Claim 10: An aqueous polymer dispersion obtained by the method of claim 1, wherein anionic emulsifiers or protective colloids used to make said aqueous dispersion that are present as said water-soluble ionic compounds prior to said removing step are limited to anionic surfactants selected from the group consisting of alkali metal salts of di- C_8 to C_{12} alkyl esters of sulfosuccinic acid, alkali metal salts and ammonium salts of di- C_8 to C_{12} alkyl sulfates, C_{12} to C_{18} alkylsulfonic acids, C_9 to C_{18} alkylarylsulfonic acids, and compounds of the formula II



(II)

in which R^5 and R^6 are hydrogen or C_4 to C_{14} alkyl and are not simultaneously hydrogen, and X and Y can be alkali metal ions and/or ammonium ions.

Claim 11: An adhesive comprising the aqueous polymer dispersion of claim 10 and at least one additive.

Claim 12: A method of bonding two substrates, comprising bonding the two substrates with the adhesive of claim 11, wherein at least one of the substrates to be bonded with the adhesive is a transparent polymer film.

Claim 13: The method of claim 12, wherein the transparent polymer film comprises a backing material, and wherein the adhesive is applied to the transparent polymer film backing material.

Claim 14: The method of claim 13, wherein the transparent polymer film is a PVC film.

Claim 15: A self-adhesive article comprising the adhesive of claim 11.

Claim 16: The aqueous polymer dispersion of claim 10, in the form of an adhesive.

Claim 17: A method of bonding two substrates, comprising bonding the two substrates with the adhesive of claim 16, wherein at least one of the substrates to be bonded with the adhesive is a transparent polymer film.

Claim 18: The method of claim 17, wherein the transparent polymer film comprises a backing material, and wherein the adhesive is applied to the transparent polymer film backing material.

Claim 19: The method of claim 18, wherein the transparent polymer film is a PVC film.

Claim 20: A self-adhesive article comprising the adhesive of claim 16.

Claim 21: The method of claim 6, wherein the at least one ionic compound is removed by treating the dispersion with an ion exchanger resin.

Claim 22: The method of claim 6, wherein the at least one ionic compound is removed by diafiltration.

Claim 23: The method of claim 6, wherein the at least one ionic compound is removed by dialysis.

Claim 24: An adhesive comprising the aqueous polymer dispersion of claim 11, wherein the at least one additive is selected from the group consisting of fillers, dyes, flow agents, thickeners, tackifiers and mixtures thereof.

Claim 25: An aqueous polymer dispersion obtained by the method of claim 1, wherein substantially all of the water-soluble ionic compounds have been removed from the polymer dispersion, prior to adding the at least one salt of a monoalkyl or dialkyl ester of a sulfonated dicarboxylic acid.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.